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ANTONIO MORENO

Zara: An Integrated Store and Online Model (A)

This fully-integrated approach is much more than stock integration. It's everything. It's our real estate strategy. It's the way we show the product in the stores. So it has a lot to do with all the different aspects of the management of the company. That is why it is so strategic.

— Pablo Isla, Chairman and CEO of the Inditex Group

In the fall of 2018, a group of senior managers of the fashion group Inditex were heading to a meeting with Group Chairman and CEO Pablo Isla to discuss how to advance Zara's "integrated model" in light of the growth of online orders. Isla, who had been Group Chairman and CEO since 2005, had topped the Harvard Business Review ranking of best performing CEOs in 2017 and 2018, and had ambitious plans for the future.[1]

Zara was the Group's oldest and largest brand, representing around 69% of sales, or €18 billion in 2018 (see **Exhibit 1**). At the core of Zara's success was an innovative business model based on a very responsive supply chain and quick merchandise turnaround. Zara designed, produced and delivered new items to stores in less than three weeks, allowing it to constantly update its collections and adapt to changing customer tastes. Stores worldwide received shipments from Spain twice a week of both new and replenishment products. The stores maintained low inventories; customers visited them frequently to see the new arrivals. Zara management viewed its more than 2,200 stores as the brands' main marketing tool and used the stores to capture quantitative and qualitative feedback on new looks and trends.

In 2010, amidst the growth of ecommerce and the emergence of new, purely online, fashion players, Zara launched its first online store, Zara.com. Since then, Zara's online business had grown at a fast pace. The rest of the brands of the Inditex Group followed a similar path. By 2018, 12% of Inditex Group's total sales came from the online channel. For those countries where Inditex had online sales, online sales were 14% of the sales in those countries. Since the inception of the first online store, Inditex leadership wanted its online and offline businesses to be integrated. However, the increase of online orders challenged some of its operations. For example, online orders had higher return rates (see **Exhibit 2** for industry-level figures), which required more attention to "reverse logistics" activities such as receiving, evaluating, and storing returned goods. "Click-and-collect" orders, for which customers ordered online and picked up their ordered products at a store, represented about one third of online

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orders.[2] Although these orders allowed Zara to contain product delivery costs, they increased in-store congestion and required stores to allocate labor to the related operational tasks.

In parallel to growing its online channel, the group had launched a "store optimization" initiative that involved opening new, large flagship stores in prime locations that "absorbed" smaller stores. Isla provided an example, "[I]n May, in Bilbao we opened a big flagship which has absorbed the four Zara stores we had in the city center. In terms of space, the new store is bigger than the four others combined. And we are selling more with this big flagship than what we used to with these four small stores."

Zara had implemented several technological innovations to improve operations. For example, all Zara items were equipped with Radio-frequency identification (RFID) tags, which allowed real-time inventory tracking. Zara's systems enabled its ability to fulfill online orders by shipping items to customers directly from a store, instead of from a distribution center. In some stores, Zara had installed robots that stored and sorted orders that customers had placed online for "click-and-collect". The technology allowed customers to pick up their orders without interacting with store associates.

Inditex was committed to the vision of becoming fully-integrated, fully-digital, and fully-sustainable by 2020 and to implement that vision had committed €1.8 billion in 2017 and €1.4 billion in 2018 for IT, logistics and stores (see **Exhibit 3** for a summary of the vision). As its largest brand, Zara often pioneered innovations that were later rolled out to the other brands. How could stores continue to be relevant in a world with increasing presence of online touchpoints? What should the store portfolio look like in the medium term? How should Zara use and advance the integrated model going forward? What other challenges and opportunities would arise with the increase of online sales?

The Inditex Group and Zara

A subsidiary of the Spanish Inditex group, Zara was a clothes and accessories brand and retailer that operated over 2,200 stores in 96 markets.[3] Zara's story began in the Spanish coastal city of A Coruna in 1963, when founder Amancio Ortega started Confecciones GOA, a modest workshop making dresses and quilt dressing gowns for distribution. In 1975, the first Zara store opened in A Coruna. By 1983, Zara had nine stores in Spain. In the 1980s, Ortega changed Zara's design, manufacturing, and distribution processes to reduce lead times and quickly react to new trends. The changes included the use of information technologies and using groups of designers instead of individuals. In 1985, Ortega launched Industria de Diseno Textil SA (Inditex), the holding company of Zara and its manufacturing plants. In 1988, Zara began its international expansion by opening a store in Porto (Portugal) and subsequently, stores in New York (USA), Paris (France), Mexico City (Mexico), Athens (Greece), and many more. In the 1990s, Inditex broadened its brand portfolio by launching and acquiring new brands (described below).[4] In 2001, Inditex had its initial public offering on the Bolsa de Madrid.[5]

By 2018, the Inditex Group had 174,386 employees, operated 7,490 stores in 96 markets, and had e-commerce stores in 156 countries (see **Exhibit 4** for the Group's financials). About 45% of the Group's sales took place in Europe (excluding Spain), about 16% in Spain, 16% in the Americas, and 23% in Asia and the rest of the world. (See **Exhibit 5** for a breakdown of brands and regions).[6]

The Group owned eight fashion chains: Massimo Dutti (higher end), Berhska (latest fashion for young customers), Oysho (women loungewear and lingerie), Pull & Bear (casual fashion), Stradivarius (urban fashion), Uterque (premium clothes and accessories), Zara, and Zara Home (see **Exhibit 6** for details). Although the founder, Ortega, was still a member of the board, the company was managed by Pablo Isla, Deputy Chairman and CEO since 2005, and Chairman and CEO since 2011.

José María Álvarez, Director of Corporate Development of the group, described Zara's approach, "Our business model is to provide to fashion-oriented customers the latest fashion trends at the right time and at affordable prices. It does not focus on selling clothing, shoes, or apparel. We focus more on an intangible part than on a functional part of the garment."

Zara's business model was built on its ability to quickly produce and deliver new products. It produced over 20,000 new designs each year. The brand kept a significant amount of its production in proximity, which gave the organization flexibility in the amount, frequency, and variety of new products launched. The design team was based in Spain. Most clothes were manufactured in Spain or in neighboring countries and then quickly shipped to stores worldwide. Items that did not change with fashion trends, such as basic T-shirts, were often manufactured in other more distant countries to save costs. (See **Exhibit 7** for an illustration). Zara made production commitments six months in advance for only 15% to 25% of a season's line, and committed to 50% to 60% by the season's start, meaning that a large fraction of its clothes were manufactured during a season.[7]

Zara's brick-and-mortar stores were a key pillar of its business model. Because the stores were the brand's main marketing tool, Zara was careful to launch stores in high-traffic locations, usually next to high-end fashion brands, and spent a very small fraction of revenue on advertising. Zara believed that its products would "speak for themselves."

Its ability to quickly fill store orders allowed Zara to operate with small, fast-moving store inventories (see **Exhibit 8** for a comparison of key metrics with other retailers). Stores transmitted information to headquarters about products, including order and sales data, customer reactions, and outlooks on upcoming trends.[8] Based on the data and anecdotal evidence, store managers sent orders to headquarters twice a week and received the products in-store within two days. The store would then display products on the shop floor. When a product was out of stock in certain sizes, the remaining inventory would be relocated from the shop floor to the backroom and replaced with new product.[9] Stores changed their offerings every few weeks, prompting customers to visit stores often to see what was new.[10] Zara's inventory management resulted in customers perceiving scarcity and feeling compelled to buy the items they liked immediately, because those items could be gone soon.[11]

Zara's model was different from other traditional fashion giants such as the Gap, which offered iconic American styles in brick-and-mortar stores and online. The Gap offered wardrobe basics such as denim and T-shirts, and also accessories and personal care products. The Gap had an average production cycle of 10 months, which caused long lead-times, distances and hand-offs in the supply chain.[12,13]As a result, the Gap could not respond to new trends and consumer demands as quickly. Excess inventory accumulated when sales expectations were not met, causing steep markdowns.[14]

Zara Online

Launch

By the time Zara launched its online operations in 2010, some of its competitors had been selling online for years. Prior to its online launch, the Zara website was essentially a catalogue with no transactional capabilities.[a] Zara management was initially hesitant to launch online due to concerns about being able to recreate online the store experience, which management thought was central to its value proposition. Álvarez argued:

[a] Zara Home had launched a transactional online store in 2007.

> The reason we did not launch Zara online earlier was because we had a clear commercial proposition in our stores and that was something we did not know whether we would be able to replicate through our PC or our laptop. When you enter a store, you can navigate freely without staff interacting with you until you need help. But in a very clean and comfortable way. We needed the internet purchase path to be as comfortable as possible. You don't want a customer to go through 20 clicks to purchase a pair of trousers. Only when technology was agile enough and the smartphones started to reach consumers in a significant scale were we able to replicate in some way what we were expecting. So once we reached that point, we launched Zara online.

Zara did not conceive the online channel as a separate, independent initiative. From the initial launch of online operations, Zara followed an integrated approach. Isla noted,

> From the very beginning, I wanted online to be totally integrated with the rest of the company. Not a separate business but totally integrated. We launched online with a strong connection with the physical store, allowing customers to return products at physical stores and to 'click and collect.' This is Zara online since day one.

Zara created new infrastructure and processes to launch its online operations. For example, Zara.com established a network of "online" distribution centers ("DCs") to fulfill online orders, and built logistics teams and processes to allocate inventory to online operations. It also created customer service operations to support customers using the online channel and stores. And it assembled teams to create the website content. Zara management stressed that, from a philosophical standpoint, the online store operated very similar to the way physical stores operated. The commercial proposition was intentionally the same online and in stores since the beginning: the same new garments, the same price, the same marketing image. In coordination with stores, online products were changed quickly, which drove frequent customer revisits. As in the stores, new products were introduced online twice a week. As a result, twice a week the online content team had to update the site's content, which included photographing new products on human models, retouching images and creating layouts and text. New products and replenishment would be shipped twice a week to the DCs, as they were to stores. And, like store managers, online team managers made new product and replenishment requests.

Zara followed a structured approach to launch online in new markets. The process started with a sales forecast to evaluate whether it needed a local DC for online product. When possible, management preferred to concentrate inventory. For example, in Europe, several markets were initially served from the DC in Madrid. As volumes grew, Zara opened additional DCs in other countries to allow faster delivery to customers. Zara's DCs for online products were typically operated by third party logistics providers.

To launch online sales in a new region, the Zara.com team worked with local Zara teams to better understand the market and benchmark customer expectations for the online channel, which could vary considerably by market. For example, in Russia customers expected to be able to pay by cash on delivery. The Zara.com teams would set up customer service, which could involve adding a new language or local dialect. The team would also adjust online content by market. One to two months before online launch, the teams trained local store associates on new processes such as "click and collect." To test that the online processes were working properly, Zara usually had a two- to three-week pre-launch period when online orders were open to employees but not the general public. The entire launch process took between three to six months, depending on whether a local online DC was added. Inditex's other brands used a similar approach to establish their online operations (see **Exhibit 9** for each brands' timeline and market coverage).

Online Operations in 2018

By 2018, Zara had physical stores in 96 markets and online operations in 156 markets served from 23 online DCs (see **Exhibit 10** for a map of the DCs). The online stores were managed directly by Zara, with a few exceptions, such as in China, where Zara also had a store in T-Mall, the main online marketplace in the country, operated by the Alibaba Group. In 2018, Zara launched a global website that made its products available in countries where it did not have online operations, delivering the online orders from Spain. This increased the number of countries where it was possible to buy Zara products online to 202. By 2020 all the brands of the Inditex Group were expected to be selling globally online. Online sales grew steadily over time (e.g, 27% growth in 2018), reaching 12% of the Group's net sales globally in 2018 (14% of the net sales in countries where the Group had online operations).

Zara charged a delivery fee (e.g., €3.95 in Spain) for online orders shipped to the customer, but offered free delivery for orders larger than a certain threshold (e.g., €30 in Spain, see **Exhibit 11** for details). Most orders were large enough to qualify for free shipping. "Click and collect" online orders incurred no delivery fees. Overall, about one third of online orders were picked up at a store. In markets with a strong physical store presence, such as Spain, the fraction of orders picked up at a store was even larger. Zara offered returns via mail (with free shipping) or at stores. More than half of the returns of online orders were returned to stores. The costs to Zara were lower when customers picked up or returned their orders at the store, and Zara enjoyed the additional benefit of attracting traffic to the store. However, Zara did not encourage customers to use certain options. Álvarez noted:

> We are not pushing. That comes back to the culture of the company since the very beginning. We don't think we are able to build a fashion trend and then push these fashion trends and convince customers to buy these garments. We follow a pull approach. The same here. If a customer wants to buy in a physical store, we want to make it available for the customer. If a customer wants to buy one of our products online, we want to make it available for the customer. We are eclectic from that point of view. We don't mind delivering a parcel from a stockroom or delivering a garment to a store and then selling through the physical store.

Although the growth of online retail created additional costs arising from the costs of home delivery and increased returns, Álvarez noted, "Zara's margins were not diluted. The company remains focused on trying to maximize sales at full price." Fernando Talín, Director of Finance of Zara.com, cited some initiatives aiming at increasing the efficiency of the process: "We are working on different projects to reduce the timing and the cost for us. We are integrating the stock that we have in the physical stores and choosing where to serve the online order from to reduce costs and increase speed."

Use of Online Data

The Zara model was based on identifying fashion trends and being very responsive to them. The traditional Zara approach relied on quantitative and qualitative information coming from the stores to guide new product introductions and replenishment decisions. Quantitative information included sales data as well as the twice a week orders from store managers, and was complemented with frequent feedback from the store managers to the commercial teams in A Coruna.

As the online channel ramped up, the amount of available data exploded. For example, there was now information about what search words customers used on the website, how much time they spent viewing a particular item, the conversion rate of each item, and what issues customers reported in live chat. Valuable data was also being generated and shared through social media, but management reported that it was often challenging to identify the right information to pay attention to.

The online channel presented interesting possibilities to inform the commercial teams' decisions. For example, commercial teams could test products in the online store, evaluate their performance, and then adjust the quantities ordered from suppliers. Talín noted, "Online is now perceived as a tool for commercial departments to explore how customers might react to new arrivals. With the physical store, we need more time, and we lack space to put all the items on the floor at the same time and measure the reaction. With the website, it's very easy." Zara had an A/B testing platform and had been increasing the number of experiments run on the site. Talín added, "Probably we can impact more decisions in the company with that information."

Integrated Inventory Management

Inventory Tracking

Accurate inventory tracking was critical for Zara's success, and had been a major focus for a long time. The sales environment of Zara stores was very complex. There were many different products -- just in the ladieswear section, a store might display around 2,000 products, 10,000 considering different sizes. And products changed very quickly. Zara presented items on the shop floor more like a luxury brand than a mass-market brand, with few units of the same item displayed on the shop floor, and additional inventory available in the store stock room. But unlike a luxury brand, sales volume was very high, resulting in a high rotation of the units on the shop floor. Zara was also careful to ensure that the presented items had an adequate size coverage. For example, if there was only one size left of an item, that product was often moved back to the stock room and substituted on the floor with another product that presented full size coverage.

Store associates constantly replenished the shop floor from the stock room. Before Zara implemented RFID, inventory tracking took a long time, making such replenishments extremely challenging. A store associate might know that a size was missing on the shop floor but would spend a lot of time trying to find it in the back room. The shop floor was often not well-replenished, even when the desired replenishment item was in the back room or misplaced on the shop floor. Inaccurate inventory also increased store associates' workload.

Experimenting with RFID

In 2008, Zara started experimenting with RFID solutions to track inventory. Initially, the goal was to improve the movement of merchandise between the back room and shop floor. Management expected RFID to increase the accuracy and efficiency of operational tasks such as merchandise receiving, inventory management, and product transfers between the stockroom and shop floor. They also expected that RFID would allow them to improve customer service by maintaining a well-replenished shop floor and by redirecting some of the associates' time to better serving customers. For example, if a customer was looking for an item that was not on the shop floor, an associate would be able to easily check if it was available in the stock room, and if so, could make the product available to the customer.

The first pilot was conducted in a group of stores over a two-year period. Associates were provided with handheld devices that indicated the real-time inventory availability and location status (backroom vs shop floor) of each item in the store. The location was identified through readings of the RFID tags that were attached to each item via antennas placed in the store. When products were moved from the stockroom to the shop floor or vice versa, the handheld device provided updated location information.

Adapting and Scaling RFID

The pilot helped identify issues that needed to be addressed to create a scalable, cost-effective process. Initially RFID tags were embedded in the price label. This approach had been tested by other retailers and some tag vendors were already offering such solutions. However, the pilot showed that the label often fell off, resulting in noisy, inaccurate data. Also, RFID tags were expensive, making single-use tags difficult to scale. Iván Escudero, Head of RFID of Inditex, noted, "Mr. Isla´s instructions were that we wanted something that could be reusable or recycled, first to be more environmentally-friendly, and second, to save money and be more affordable." His team's solution was to insert the RFID tag in the hard-plastic tag that all items had for security and loss prevention purposes. These tags were recirculated, addressing both environmental and cost concerns. No other retailer had tried such integration before.

The pilot also revealed problems arising from the fact that the existing RFID inlays were directional, meaning that the inlay's orientation determined whether (and how far) the tag could be read. Garments on the sales floor and in the stockroom were stored differently -- some folded, some on hangers, etc. The inlays thus pointed in different directions and the reading perimeter (the distance the tag could be read) ranged from just a few centimeters to 10-15 meters. Zara worked with Tyco, its supplier of loss prevention tags, to create a spherically-shaped solution with a more consistent reading perimeter from all directions. By 2012, Zara had integrated the RFID inlay into its loss prevention tags. The solution was reusable and affordable (adding only a few cents to the cost of each item), and could operate in the complex environment of the Zara stores (see **Exhibit 12**).

Zara continually improved its RFID processes. The loss prevention tag was traditionally attached to the product by the apparel supplier before shipping the finished goods to Inditex. It proved difficult and error-prone to distribute tags with pre-recorded information to suppliers. Instead, the Inditex team decided that the suppliers would attach the loss-prevention tags without encoded product information and that Zara's DCs would encode the information as shipments were received from suppliers. After a product was sold, the associate deleted the tag codification, removed the tag, and sent it back for recirculation. The used-tag recirculation process improved over time, and Zara became able to reuse almost 100% of the tags. Store associates processing returns could encode the tags using the store's point of sales system, transferring a returned item's SKU information to a new RFID tag and attaching it to the item.

RFID changed many store processes. For example, receiving new merchandise in a store was significantly simplified. An associate would simply point a handheld device to the box containing the new merchandise and records would be instantaneously updated. In addition, after implementing RFID, Zara associates no longer needed to conduct labor-intensive inventory audits. The implementation of RFID also fostered the creation of new tools and processes. For example, Inditex's IT group developed a tool that determined what inventory should be transferred between the back room and the shop floor. Every thirty minutes, associates would receive a list of items to be moved from the stockroom to the shop floor and vice versa. Gabriel Moneo, Inditex's Chief IT Officer, described the logic behind the algorithm:

> The process does not simply replenish the sales happening on the shop floor, but it considers the ideal inventory each item in the shop floor should have. It could identify that a product does not have an adequate size coverage in the shop floor and should be sent back to the stockroom. It could also identify that some products in the stock room should be moved to the shop floor to increase the size coverage or to maximize the sales opportunities.

By 2018, Zara had implemented RFID in all of its stores worldwide. Using RFID, Zara's inventory accuracy levels increased above 98%. This was a significant accomplishment in the retail industry which was notorious for poor inventory accuracy, with some sources documenting accuracy levels below 70%.[15] Consistent with the vision of having a fully-integrated model by 2020, all of Inditex's brands were adopting RFID.

Integrating Online and Offline Inventory

Increased inventory accuracy had direct implications for the integration of the online and offline businesses. If Zara knew where each item was in the store network, that inventory could potentially be used to fulfill offline or online orders. This integration created both challenges and opportunities. In 2018, Isla created a new position, the Group Chief Operations Officer, to provide coordination between IT, logistics, and the commercial areas. Carlos Crespo, who had had a long career with Inditex, was appointed to the role. He noted, "My main challenge today is to implement a fully-integrated inventory model. For that, we needed RFID in all stores, so that we know the stock and if an item is available for sale."

Inditex internally developed an order management software solution for integrating inventory visibility and allocation across the organization. The order management solution aggregated inventory information provided by the RFID tags, making that information visible and usable. For each online order, it searched the Inditex network of stores and DCs for inventory that could fulfill that order. The algorithm chose how to fulfill the order based on variables such as the selling price of the order, transportation cost, location of store or DC, and inventory levels. For example, if a customer placed an order for home delivery and the customer lived near a store where the software detected that there was inventory available, it could be optimal to fulfill that order from the store. When the customer placed the order, the software would reserve the inventory so that it was not sold at the store or offered to another online customer.

The order management software gave the flexibility of filling orders from inventory distributed around the world. The software could be adapted as business needs evolved. Management could define rules to determine which inventory to use for each order, and such rules could be changed dynamically.

Store Fulfillment of Online Orders

Enabling store fulfillment of online orders (i.e., delivering products from stores to customers' homes) required changes in store processes. In some countries, such as the UK, all stores had been enabled to fulfill online orders. Stores designated a small area in their stockroom for preparing the packages for online orders. Internally-developed software linked store inventory to online orders. Based on a computer-generated list of orders to be fulfilled from the store, one or two associates would pick items and prepare shipments. Depending on the store and its volume, these positions were dedicated or rotated among the associates. Some stores had different stockrooms for ladieswear, children's wear and menswear. Typically, the online order fulfillment area was in only one of the stockrooms. When orders included items from different stockrooms, it could take a few minutes to pick the products from the different stockrooms and prepare the shipment. The costs of fulfilling an online order and delivering to the customer's home were lower for DCs than stores, since DCs were designed for picking and packing. DC's noncommercial locations also lowered real estate costs.

Integrated online and store inventory information was valuable in multiple ways. For example, when a customer returned a product to a store, it could be the case that the returned product was no longer displayed on the sales floor due to the fast product rotation. Before the integration of inventory information, that product may have been discounted. With the integration of inventory information and RFID encoding capability, such products had a higher chance of being sold at full price. The integrated inventories also increased product availability. Some sizes and styles might sell out at the online DC but still be available in a store. Those units could be used for online customers.

Zara kept tweaking the integrated model to increase inventory productivity. One test it ran at some stores was to create a "virtual window." The virtual window was an option used by associates to sell online items that were no longer to be displayed in the sales floor, for example because there was only one unit left and no further replenishments were planned (see **Exhibit 13**). These were units that would be very hard to sell in the store. These units were now made part of a separate category of units that the order management software would prioritize when fulfilling online orders.

The fraction of products sold at full price, a key metric Zara tracked closely, had shown signs of increasing in markets where integrated inventory was piloted.

Integration of store and online DC in the UK

As some of Zara's stores grew in size, the company's traditional model of store delivery became constrained. With two deliveries per week, large store's stockrooms were too small to store the "ideal" amount of inventory to fill demand. Zara began experimenting, in the UK and other markets, with leasing an overflow warehouse near large stores, in locations with convenient store access but with lower real estate costs. Overflow inventory that did not fit in the store backroom upon regular store delivery was taken to the warehouse, which sent frequent replenishments to the stores to optimize their inventory levels.

Zara opened one of such warehouses near London in 2013. In the beginning, this warehouse held overflow inventory for only one or two stores, but it was soon serving 26 stores with several replenishments per day. Initially, each store still "owned" the inventory that had been rerouted and stored in the warehouse. Over time, Zara started to reallocate the inventory in a way that was more responsive to customer needs. For example, if the warehouse held some units allocated to Store A that would be more useful in Store B, that inventory would be reallocated. Eventually, Zara managed the warehouse inventory as a common pool for the 26 stores. The bi-weekly orders were still calculated at the store level, but overflow that did not fit in the store stockroom was held in the warehouse, assigned to the common pool, and used to fill the inventory needs of the store that needed it the most.

In 2015, Zara leased a DC for online orders near London and treated this "online DC" as it would treat a store. Twice a week, the UK online manager placed orders and the DC received new arrivals and replenishments from Spain. In 2018, Zara piloted a system to integrate the overflow warehouse and the online DC into an integrated DC. The DC contained two separate areas, each with tailored processes to ship parcels to customers or to send product to stores. The integrated DC held both inventory overflow from the stores and inventory for online orders. Zara treated all the inventory in the integrated DC as a common pool and used it to replenish stores or fulfill online orders.

The decision about daily store replenishment quantities was automated. The algorithm calculated ideal inventory levels based on a number of factors. Daily shipment quantities were constrained by store stockroom capacity and by inventory levels in the integrated DC. Store managers provided ongoing feedback about the inventory they would like to receive at the store. A store manager wishing

to bet on a specific product could request it and the automated decision could be overridden by the Logistics team. Mar Prada, Head of Logistics in the UK, believed there were benefits of keeping inventory in the integrated DC for longer. Prada explained, "If I were to choose, I would rather hold the inventory in the integrated DC as long as I possibly can. Because once you send it to a store, you are committed. If I can hold onto it for a little bit longer, then I'll be much more accurate on how much we send to each store and when."

Zara's Integrated Store Concept

Although the majority of Zara's sales were still made at stores, an increasing number of customers interacted with both online and stores in different parts of their transactions. Isla explained,

> For example, in China, we're also seeing customers that come to the store with the list in the iPhone. They know what they are thinking to buy. They come to the store. They ask for the garments. They try them on. They decide what they take or not, and they don't buy in the store; they order online because they want to go to another shop or to have dinner and they don't want to carry the bag.

Isla emphasized that Zara was channel-agnostic,

> Wherever a customer wants to buy a garment - in a physical store or online - our task is to match the demand with the offer. Technology provides us with new tools to allow customers to look for, find and purchase items. From their smart phones they have access to a wider product offering than in the physical stores. That's why we have been enlarging, updating the look of our stores and actively managing the store portfolio.

In 2012, Zara started a store optimization plan (see **Exhibit 14** for the timeline). Isla explained, "We have opened stores. But in a much more demanding way than ever, regarding any new opening, we are investing; we have invested a lot in enlarging and refurbishing existing stores, and at the same time absorbing smaller stores." Isla added, "The stores that we want to offer to our customers are incorporating technology, displaying a wider product proposition and are easy to navigate. It's a store able to compete in the digital environment. The stores are part of the online proposition."

Isla described an example of the store optimization program in Bilbao (see new store in **Exhibit 15**):

> We used to have four small Zara's in the city center, opened in the '80s and '90s. Now we have opened a big flagship in the city and we have absorbed the four smaller stores. So it was four; now it's one. In terms of space, this one is a little bit bigger than the four combined. In terms of sales, we are selling more. Because we have now this global store creating a better experience and customer service. And, because we have only one store and not four, we are running the operation with significantly less stock, which is also very relevant for our business.

Zara had several new flagship stores in the pipeline, in places such as Paris and Oxford. Visually, the new stores were large and bright, with products visible from outside the store. That eliminated the need for window dressing, which could be time consuming with such fast-changing products.

The ramp up of the online channel affected store layout and functionality. In addition to the areas in the stock room designated for fulfillment of online orders, many stores created an area where customers could collect orders they had placed online. Some stores added a fitting room to this area so customers could try on those products. As click-and-collect orders increased, the areas became

congested, and queues occasionally formed to speak to an associate and pick up the items. To reduce congestion, Zara piloted a click-and-collect robot (see **Exhibit 16** for a picture). Using the click-and-collect system, customers scanned a QR code or input a PIN in the self-service machine. Behind the scenes, a robotic arm picked and delivered the order, often within seconds. (The inventory for the robot was stored optimally according to package size.) The refurbished Stratford store (in a mall in East London) was equipped with two robots, which together could hold up to 2,400 orders. Some customers left the products in the click-and-collect station for days. The longer the pickup delay, the more likely the product was no longer active in the store, reducing the value of any returns.

Zara was experimenting with several additional in-store technologies (see **Exhibit 17**).[16] Customers could use Zara's self-service RFID checkouts (see **Exhibit 18**) and could pay with their smartphones..[17] Some stores were piloting fitting rooms with RFID readers. The readers scanned the items brought into the fitting room and gave customers outfit recommendations that appeared in the dressing room mirror. Zara also piloted an augmented reality app, Zara AR, which allowed customers to see 3D images on their smartphones of fashion models wearing the displayed item.

In the stores, associates were equipped with IPODs (see **Exhibit 19** for a picture) to help customers find and order their sizes when items were not available in the store.[18] In the same way that online had access to Zara stores' inventory, store associates could now access the inventory at other stores and the online DCs, and could even offer their customers products that were not carried at their store.

Over time, initial concerns by store associates about the integrated model dissipated. Talín noted, "Now every single store can feel like a flagship because they have everything available and, additionally, store associates are compensated for online orders."

The Way Forward

As the senior management walked to Isla's office, they reflected on Zara's journey. Zara had come a long way since its 2008 RFID experiments. What should be the next steps? Some of the ongoing pilots enabled by the integrated model raised questions about practices that were deeply rooted in Zara's history. Some stores in the UK were now receiving merchandise every day from the integrated DC, as opposed to twice a week. Should this model be adopted in other regions? In the medium to long term, how would customer behavior evolve? And what should be the future role of the stores?

Infrastructure and systems were now in place and ready to be extended to all Inditex brands by 2020. How should Inditex leverage these capabilities with the other brands? There had been promising pilots, but questions remained regarding how to best use the integration features and about how key operational decisions would affect margins.

As the group was entering Isla's office, they reflected on the perspective that Isla had often shared in the past: "This fully-integrated approach is much more than stock integration. It's everything."

Exhibit 1 Evolution and Growth of Inditex Revenues

a) Evolution of Revenues of Inditex Brands (€ Million)

Net Sales (€ Million)

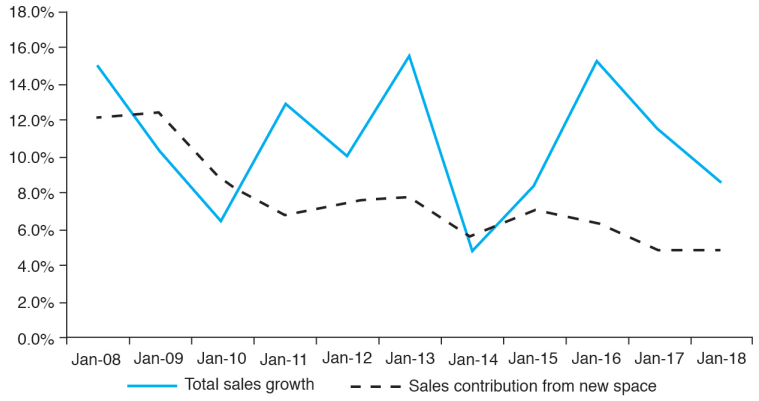
	2018	2017	2016	2015	2014
New sales (€ Million)	26,145	25,336	23,311	20,900	18,117
Like-for-like sales growth	4%	5%	10%	8.5%	5%
Online sales as % of total	12	10	N.R.	N.R.	N.R.

Sales by Brand (€ Million)

	2018	2017	2016	2015	2014
Zara + Zara Home	18,021	17,449	16,168	14,294	12,142
Pull & Bear	1,862	1,747	1,566	1,417	1,284
Massimo Dutti	1,802	1,765	1,630	1,498	1,413
Bershka	2,240	2,227	2,012	1,875	1,664
Stradivarius	1,534	1,480	1,343	1,289	1,130
Oysho	585	570	509	452	416
Uterqüe	101	97	83	75	68

Source: Company documents.

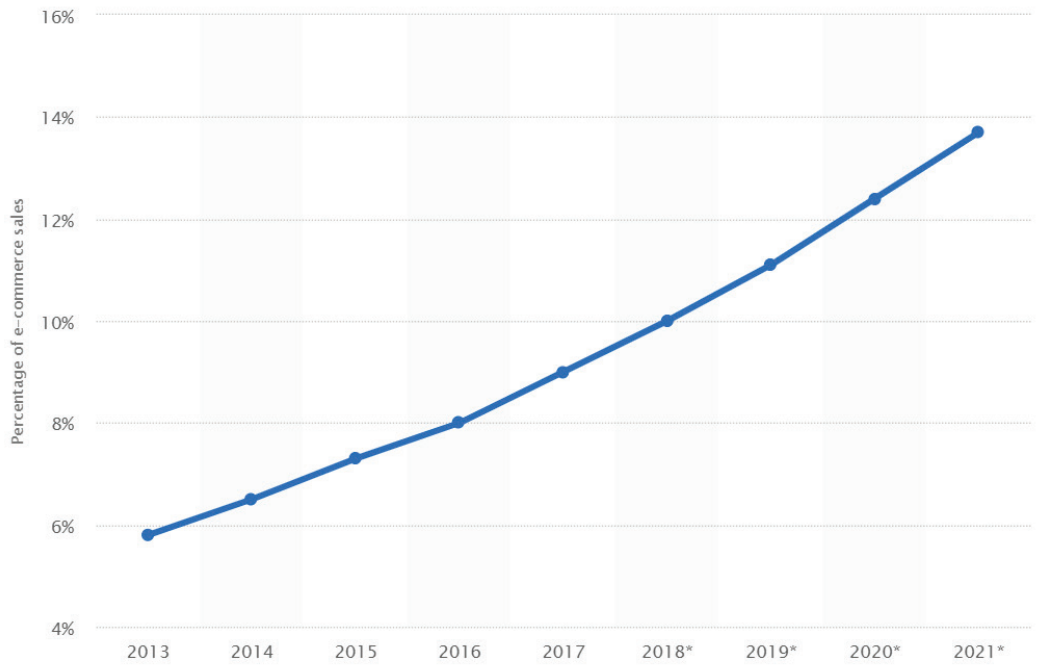
b) Total Sales Growth over Time



Source: Deutsche Bank Markets Research, "Charting the Year," March 15, 2018, p. 37, via Thomson, accessed June 2018.

Exhibit 2 Share of eCommerce Sales and In-Store and Online Return Rates in the U.S.

a) Share of eCommerce Sales in the U.S.



Source: Statista, accessed September 2019

b) In-Store and Online Return Rates in the U.S. in Retail Industry, 2008

Source: "Solving Retail's Most Expensive Problem with AI Powers Returned Reductions," Coresight Research, July 1, 2019, available at https://coresight.com/research/innovator-intelligence-solving-retails-most-expensive-problems-with-ai/, accessed July 2019.

Exhibit 3 Inditex's Integrated Strategy

Store optimization	2012-2018
Gross openings	3,364
Refurbishments	2,374
Enlargements	1,019
Absorptions	(1,401)

Source: Company data (Presentation of 2018 results).

Exhibit 4 Inditex's Key Data

a) Consolidated Income Statement

(Amounts in € millions)	2018	2017
Net sales	26,145	25,336
Cost of sales	11,329	11,076
Gross Profit	14,816	14,260
%	56.7%	56.3%
Operating expenses	9,329	8,944
Other losses and income, net	30	38
Gross Operating Profit (EBITDA)	5,457	5,277
Amortization and depreciation	1,100	963
Net Operating Profit (EBIT)	4,357	4,314
Financial results	17	5
Results of companies accounted for using the equity method	54	42
Profit before taxes	4,428	4,351
Income tax	980	979
Net Profit	3,448	3,372
Net Profit Attributable to Non-controlling Interests	4	5
Net Profit Attributable to the Parent	3,444	3,368
Earnings per Share, euros	1.106	1.082

Source: Company data.

b) Consolidated Balance Sheet

(Amounts in € millions)	2018	2017
Assets		
NON-CURRENT ASSETS	11,064	10,084
Rights over leased assets	464	457
Other intangible assets	346	255
Goodwill	206	207
Property, plant, and equipment	8,339	7,644
Investment property	20	21
Financial investments	267	237
Other non-current assets	564	520
Deferred tax assets	858	744
CURRENT ASSETS	10,620	10,147
Inventories	2,716	2,685
Trade and other receivables	820	778
Income tax receivable	108	110
Other current assets	162	160
Other financial assets	20	12
Current financial investments	1,929	1,472
Cash and cash equivalents	4,866	4,931
TOTAL ASSETS	**21,684**	**20,231**
Equities and Liabilities		
EQUITY	14,682	13,522
Equity attributable to the parent	14,653	13,497
Equity attributable non-controlling interests	30	25
NON-CURRENT LIABILITIES	1,618	1,536
Provisions	229	259
Other non-current liabilities	1,072	1,005
Financial debt	5	4
Deferred tax liabilities	312	268
CURRENT LIABILITIES	5,383	5,173
Financial debt	84	12
Other financial liabilities	47	105
Income tax payable	153	151
Trade and other payables	5,099	4,906
TOTAL EQUITY AND LIABILITIES	21,684	20,231

Source: Company data.

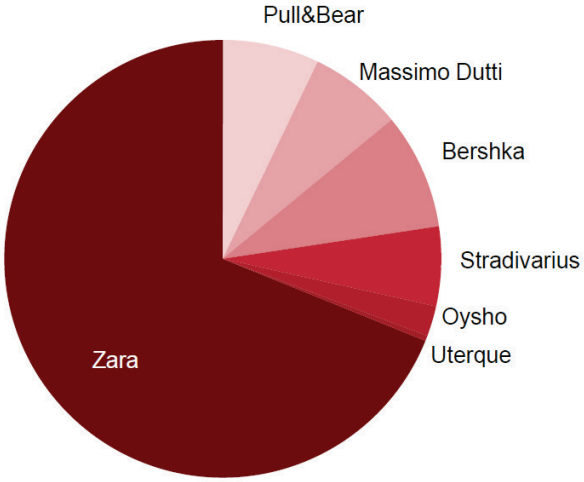
c) Consolidated Statement of Cash Flows

(Amount in millions of euros)	2018	2017
Profit before taxes and non-controlling interest	**4,428**	**4,351**
ADJUSTMENTS TO PROFIT		
Amortization and depreciation	1,100	963
Foreign exchange translation devices	33	75
Provisions for impairment	20	91
Results from companies consolidated by equity method	54	42
Other	14	151
Income tax	1,070	1,029
Funds from operations	**4,378**	**4,411**
Variation in assets and liabilities		
Inventories	70	293
Receivables and other current assets	142	216
Current payables	137	372
Changes in working capital	**349**	**449**
Cash flows from operating activities	**4,029**	**3,961**
Payments relating to investments in intangible assets	230	183
Payments relating to investments in property, plant & equipment	1,391	1,589
Collections relating to divestments of property, plant, & equipment	159	381
Payments relating to investment in companies	-	30
Collections relating investment in other financial investments	24	44
Payments relating investment in other financial investments	-	24
Payments relating investment in other assets	23	25
Collections relating investment in other assets	43	29
Changes in current financial investments	457	565
Cash flows from investing activities	**1,875**	**833**
Collections relating to non-current financial debt	4	3
Payments relating to non-current financial debt	2	3
Payments relating to acquisitions of treasury shares	-	12
Changes in current financial debt	73	47
Dividends	2,335	2,127
Cash flows used in financing activities	**2,260**	**2,186**
Net increase in cash and cash equivalents	106	943
Cash and cash equivalents at the beginning of the year	4,931	4,116
Effect of exchange rate fluctuations on cash and cash equivalents	41	128
Cash and cash equivalents at the end of the year	**4,866**	**4,931**

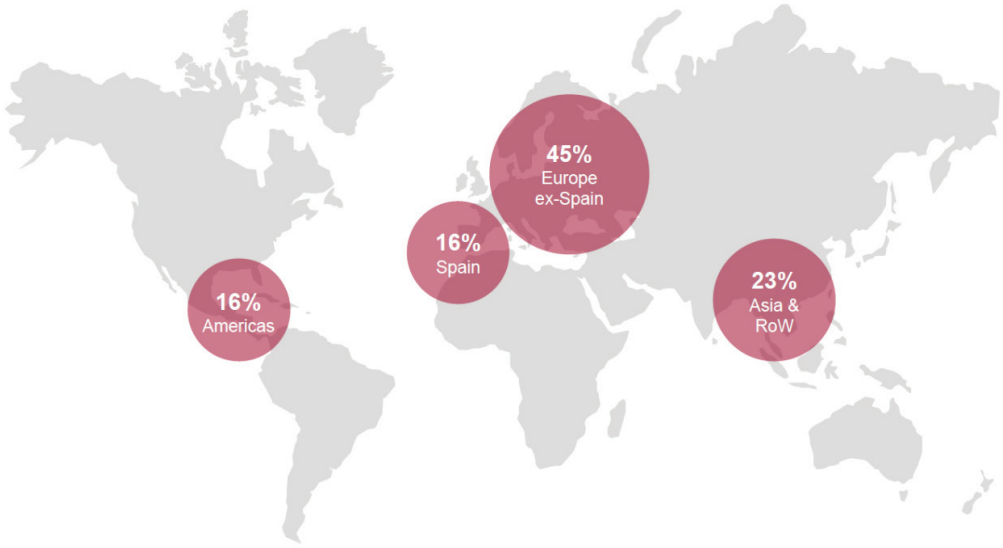
Source: Company data.

Exhibit 5 Inditex Store and Online Sales Breakdown (2018)

a) Store and online sales by brand



b) Store and online sales by region



c) Commercial Presence

	2018	2017	2016	2015	2014
No. of markets	202	96	93	88	88
No. of markets with stores	96	96	93	88	88
Number of stores	7,490	7,475	7,292	7,013	6,683
No. of markets with online sales	156	47	43	29	27

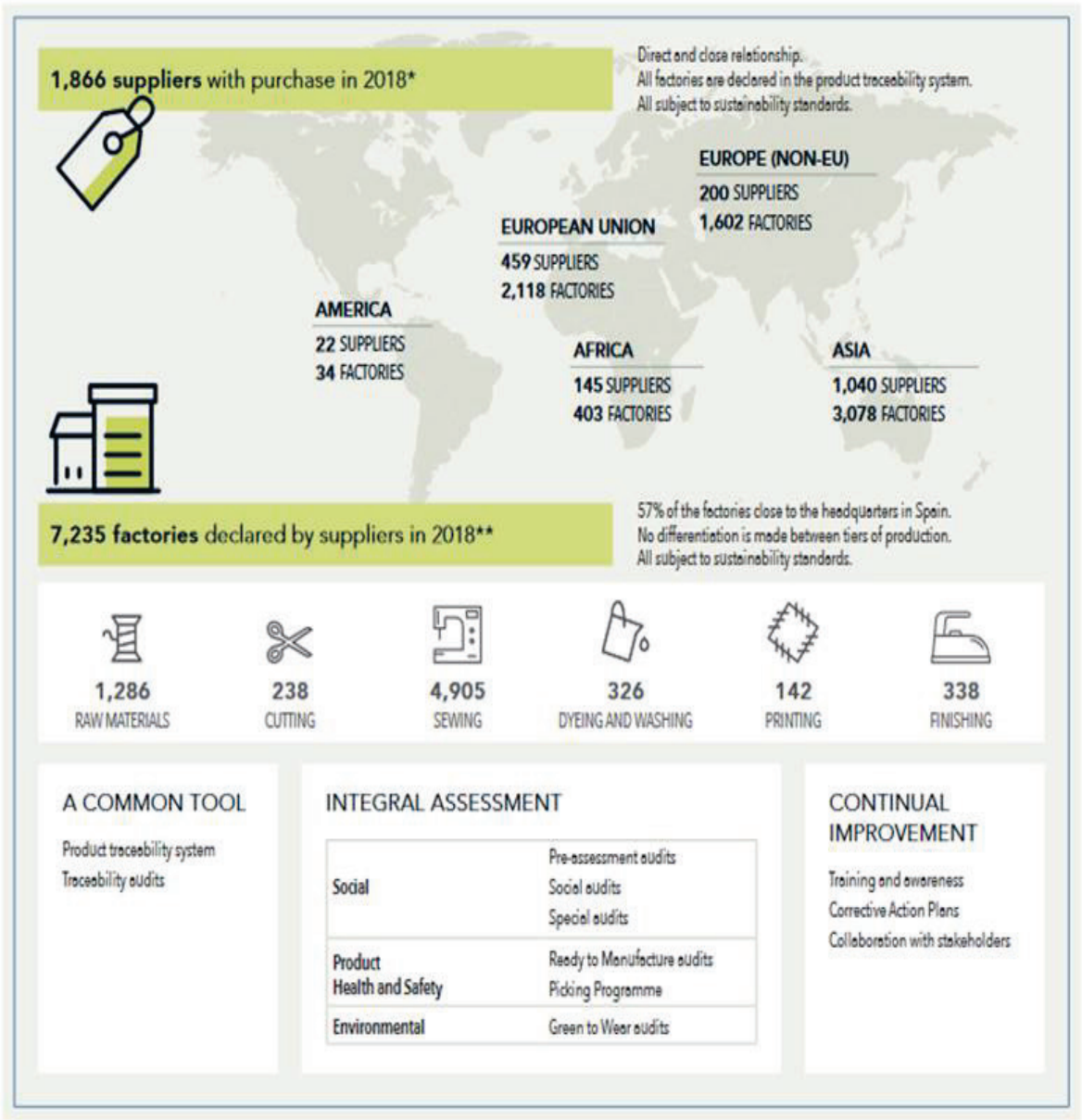
Source: Company data (Presentation of 2018 results).

Exhibit 6 Inditex Group's Other Brands in 2018

	Pull & Bear	Massimo Dutti	Bershka	Stradivarius	Oysho	Zara Home	Uterqüe
Founded	1991	1991 (acquired)	1998	1999 (acquired)	2001	2003	2008
Points of sale	979	780	1098	1017	670	590	90
Total revenue	1,747	1,765	2,227	1,480	570	830	97
Sales CAGR (10-17)	11%	10%	9%	10%	9%	16%	7%
EBIT margin	15.1%	14.7%	15.8%	15.2%	15.3%	11.7%	5.2%
Lines	Women and Men; 2 lines: one intended for teenagers and one meant for adults who have grown up with the brand	Women, Men and Children	Bershka, BSK and Man	Historically a women's label only, Stradivarius expanded into men's wear just in the beginning of 2017	Women only	–	Women only
How Inditex describes the concept	Pull & Bear aims to dress dynamic people and fashion lovers who are young at heart	Massimo Dutti epitomizes a natural elegance that appeals to urbane, independent and cosmopolitan men and women	Bershka's fashions are uniquely tailored to meet the tastes of an adventurous next generation interested in music, social networking and pioneering technologies	Stradivarius captures the essence of youthful creativity	Oysho's collections are carefully curated to infuse today's trends with the timeless principles of elegance, romance and subtle femininity	Zara Home incorporates the latest ideas and designs into everyday living	

Source: Chiara Battistini, "Inditex: A Winning Model Still," JP Morgan Cazenove, January 30, 2019, accessed via Thomson.

Exhibit 7 Inditex Supply Chain (2018)



* Suppliers with purchase in 2018 of fashion items, mainly clothing, footwear and accessories with production for Inditex of more than 20,000 units/year. Suppliers with lower production account for 0.23% of the total production.

** Textile, footwear and accessory factories declared by suppliers in the product traceability system for orders in 2018.

For those factories involved in more than one process, figures refer to the main process performed. Due to the updating and improvement of Inditex's traceability tool, the information on the processes is not fully comparable with that of previous years.

Source: Company data.

Exhibit 8 Zara and its Competitors in FY2018 (numbers rounded)

Brands	Revenue ($M)	COGs ($M)	Gross Margin ($M)	EBIT ($ M)	EBITDA ($ M)	Net Income ($ M)	# Stores	# Employees	Inventory Turns	ROCE (%)
Inditex	26,145	11,085	15,060	4,357	5,457	3,448	7,490	174,386	4.1x	24%
H&M	21,117	9,705	11,413	2,172	3,040	1,709	4,739	177,000	2.8x	19.3
Gap	15,855	9,789	6,066	1,442	2,001	848	3,594	135,000	5.1x	20.9
Zalando	5,043	2,842	2,201	211	254	116	3	15,528	3.7x	7.9

Inditex, H&M and Gap were the three largest specialty retailers in 2018. H&M (Hennes & Mauritz AB) was a Swedish apparel retailing company. Gap, headquartered in San Francisco, California, consisted of 6 divisions (Gap, Banana Republic, Old Navy, Intermix, Hill City, and Athleta). Zara and H&M were known for short lead times. In contrast, Gap's lead times from product design to product delivery averaged 10 months.*

Source: Compiled from Capital IQ. N. Stores figures come from H&M's 2017 Annual Report, The Gap's 2018 Annual Report, Inditex's 2017 Annual Report, and Zalando's website (https://corporate.zalando.com/en/newsroom/en/stories/leipzig-and-hamburg-zalando-opening-two-new-outlets-2018), accessed June 5, 2019.

Notes: $M stands for millions of United States Dollars. FY2018 refers to the fiscal year ending in January 2019 for Inditex, November 2017 for H&M, February 2018 for Gap, and December 2017 for Zalando. Inditex, H&M, and Gap figures are reported for their parent companies. ROCE stands for Return on Capital Employed.

* "Predicting Consumer Tastes with Big Data at Gap," HBS No. 517-115, by Ayelet Israeli and Jill Avery

Exhibit 9 Openings of Online Stores

a) The Timeline

Source: Company data.

b) Country Coverage over Time (Number of Countries Covered Online by each Inditex Brand)

Concept	2010	2011	2012	2013	2014	2015	2016	2017
Zara online presence	11	18	21	22	26	27	39	46
Pull & Bear online presence	0	13	17	18	21	21	33	33
Massimo Dutti online presence	0	10	19	21	24	24	37	37
Bershka online presence	0	12	13	14	17	17	32	35
Stradivarius online presence	0	6	6	13	17	18	32	32
Oysho online presence	0	10	12	13	15	16	32	33
Zara Home online presence	15	17	20	21	23	25	37	37
Uterqüe online presence	0	6	9	9	14	16	30	30

Source: Chiara Battistini, "Inditex: A Winning Model Still," JP Morgan Cazenove, January 30, 2019, accessed via Thomson.

Exhibit 10 Zara's Online Distribution Centers in 2018

Source: Company data.

Exhibit 11 Zara's Shipping Times and Prices

a) Screenshot: Zara's Shipping Times and Prices for an Order Placed June 6, 2019, in Madrid

Process order

1. SHIPPING > 2. PAYMENT

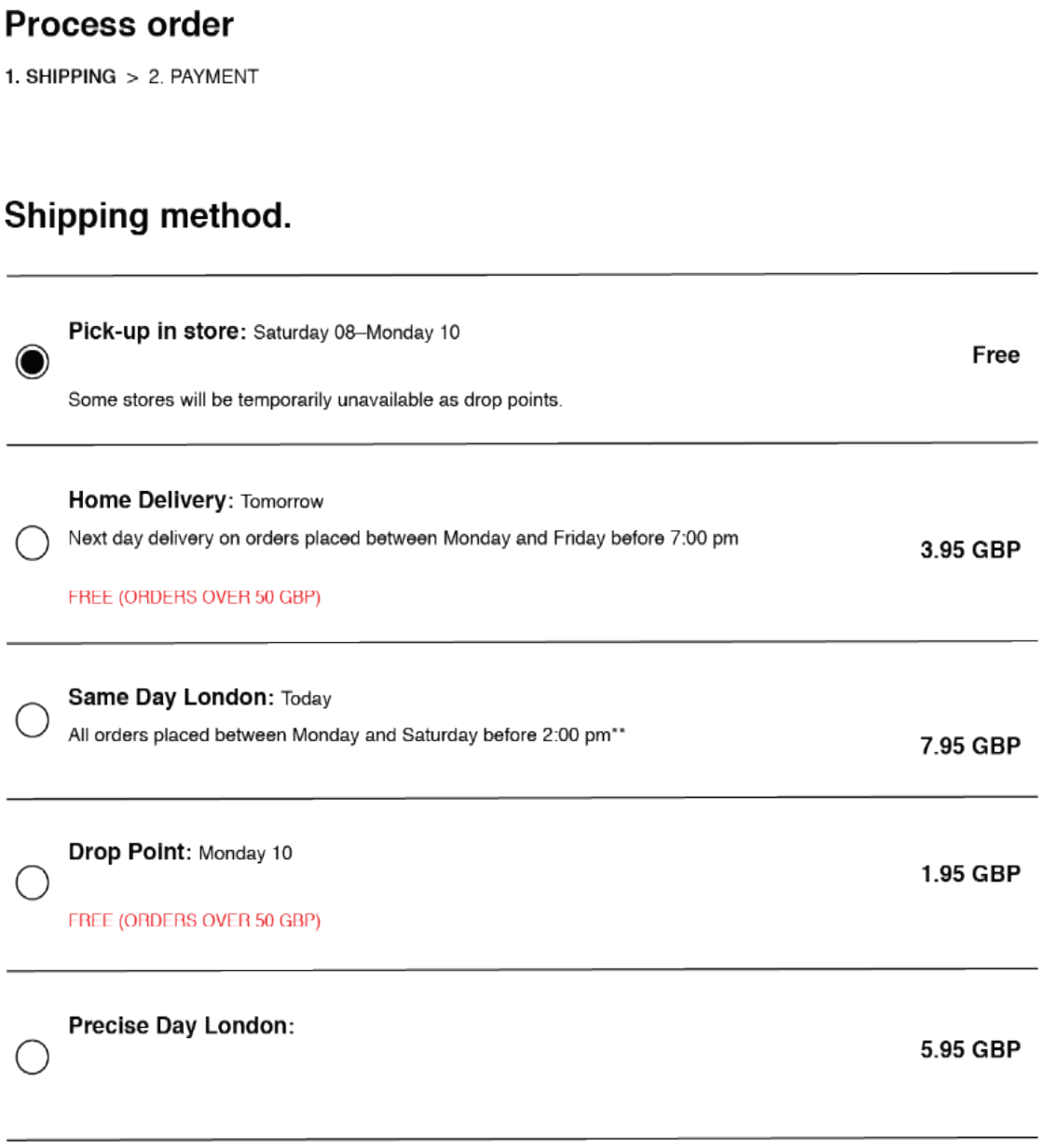
Shipping method.

◉	**Pick-up in store:** Monday 10–Tuesday 11 Some stores will be temporarily unavailable as drop points.	**Free**
○	**Home Delivery:** Tomorrow Next day delivery on orders placed before 21:00 Monday to Friday* FREE (ORDERS OVER 30 EUR)	**3.95 EUR**
○	**Same Day Madrid:** Today Same day delivery in Madrid if you buy before 14:00 Mondy to Friday	**5.95 EUR**
○	**Drop Point:** Wednesday 12 FREE (ORDERS OVER 30 EUR)	**3.95 EUR**

* Excluding Balearic Islands, Ceuta and Mélida

Source: Zara's Spain online store page at https://www.zara.com/webapp/wcs/stores/servlet/OrderShippingPage?catalogId=24054&langId=-1&storeId=10706, accessed June 6, 2019.

b) Screenshot**:** Zara's Shipping Times and Prices for an Order Placed June 6, 2019, in London



Process order

1. SHIPPING > 2. PAYMENT

Shipping method.

◉	**Pick-up in store:** Saturday 08–Monday 10 Some stores will be temporarily unavailable as drop points.	**Free**
○	**Home Delivery:** Tomorrow Next day delivery on orders placed between Monday and Friday before 7:00 pm FREE (ORDERS OVER 50 GBP)	**3.95 GBP**
○	**Same Day London:** Today All orders placed between Monday and Saturday before 2:00 pm**	**7.95 GBP**
○	**Drop Point:** Monday 10 FREE (ORDERS OVER 50 GBP)	**1.95 GBP**
○	**Precise Day London:**	**5.95 GBP**

Source: Zara's UK online store page at https://www.zara.com/webapp/wcs/stores/servlet/OrderShippingPage?catalogId=24551&langId=-1&storeId=10701, accessed June 6, 2019.

c) Zara's Shipping Prices by Selected Country

Country	Pick Up in Store	Standard Delivery	Same Day Delivery	Express Delivery	Precise Day Delivery	Drop Point
Spain	Free	€3.95/ Free for orders > €30	€5.95	No	No	€3.95 / Free for order > € 30
UK	Free	£3.95/ Free for orders > £50	£7.95	No	£5.95	£1.95 / Free for orders > £ 50
USA	Free	$4.95/ Free for orders > $50	$9.95	$9.95	No	No
China	Free	¥10 / Free for order > ¥199	¥10/ Free for orders > ¥199	No	No	No

Source: Compiled from Zara Spain (https://www.zara.com/es/en/help/delivery-methods-and-costs-h32.html), Zara UK (https://www.zara.com/uk/en/help/delivery-methods-and-costs-h32.html), Zara USA (https://www.zara.com/us/en/help/shipping-methods-and-pricing-h32.html), and Zara China (https://www.zara.cn/cn/en/help/delivery-methods-and-costs-h32.html), all accessed June 6, 2019.

Note: € denotes price in Euros. £ denotes price in British Pound Sterling. $ denotes price in United States Dollars. ¥ denotes price in Chinese Yuan.

Same day delivery meant that products were delivered to the customer's home on the same day of purchase if purchased before a stated time. Same day delivery was only available in Madrid (Monday-Friday, for orders placed before 2PM, London (Monday -Saturday, before 2PM), New York City (Monday-Friday, before 1PM), and Shanghai before noon.

Express Delivery referred to shipping that was faster than standard shipping but not delivered on the same day. Precise day delivery allowed the client to choose an exact date and time for the order to be delivered to their home. Precise day delivery was only available in London. The drop point option allowed customers to pick one of several predetermined locations, for example a shipping office, for their package to be delivered to so that the customer can retrieve it from the drop point later.

d) Zara Shipping Times by Selected Country in 2019

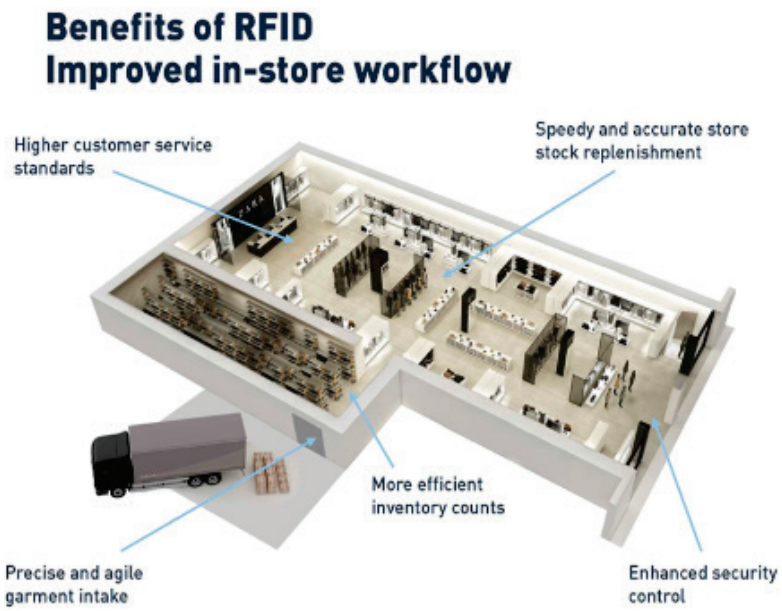
Country	Pick Up in Store, # Days	Standard Delivery, # Days	Same Day Delivery	Express Delivery, # Days	Precise Day Delivery	Drop Point, # Days
Spain	2-3	1	Yes	No	No	2-3
UK	2-3	1	Yes	No	Yes	2-3
USA	3-5	2-4	Yes	1-2	No	No
China	2-7	2-7	Yes	No	No	No

Source: Compiled from Zara Spain (https://www.zara.com/es/en/help/delivery-methods-and-costs-h32.html), Zara UK (https://www.zara.com/uk/en/help/delivery-methods-and-costs-h32.html), Zara USA (https://www.zara.com/us/en/help/shipping-methods-and-pricing-h32.html), and Zara China (https://www.zara.cn/cn/en/help/delivery-methods-and-costs-h32.html), all accessed June 6, 2019.

Note: See Note on Table above for definitions of different pick up options. Same day delivery is only available in Madrid, London, New York City, and Shanghai. #Days refers to the number of business days after the day the order is placed, and #Days = 0 means same day delivery. Deliveries were made only on business days. Customer's choice under precise day delivery means that since the customer was choosing what day their package would be delivered, they were also choosing the number of days it would take the package to arrive. Precise day delivery was available only in London.

Exhibit 12 RFID Technology at Zara

a) How it Works



Source: Zara website, https://www.inditex.com/article?articleId=150174&title=Inditex+deploys+RFID+technology+in+its+stores, accessed June 2019.

b) RFID Tags Embedded in Hard-Plastic Security Tags

Source: "Inditex CEO Announces RFID Expansion Plans," rfidjournal.com, July 17, 2014, at https://www.rfidjournal.com/articles/view?11993, accessed June 2019.

Exhibit 13 Virtual Window

Source: Casewriters.

Exhibit 14 Zara's Store Differentiation and Optimization Program

STORE DIFFERENTIATION AND OPTIMIZATION PROGRAM	2018	2017	2016	2015	2014	2013
Number of stores	7,490	7,475	7,292	7,013	6,683	6,340
Number of markets with brick-and-mortar stores	96	96	93	88	88	87
Number of markets with online stores	156	47	43	29	27	25
Gross openings	370	524	444	428	459	511
Refurbishments	226	122	233	215	187	277
Extensions	112	144	191	171	194	132
Units absorbed	355	341	165	98	116	180
Net openings	15	183	279	330	343	331

Source: Company data.

Exhibit 15 Zara New Store in Bilbao (2018)

Source: Company data.

Exhibit 16 Click-and-collect Machine

Source: Inditex Annual Report 2017, p. 43.

Exhibit 17 Store Technology

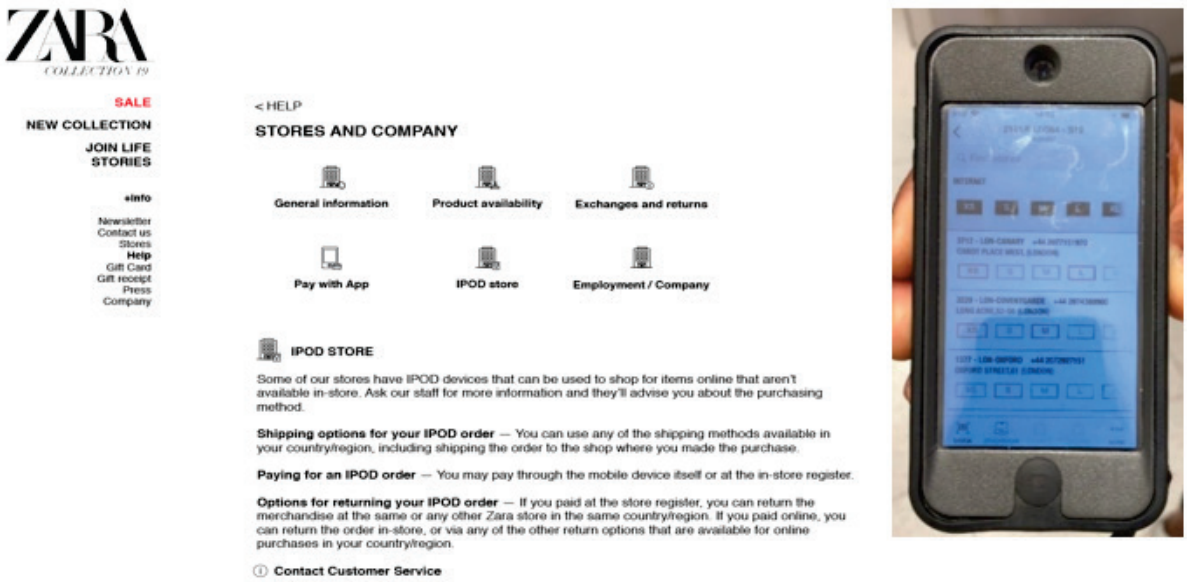
Technology	Details
Radio Frequency Identification (RFID)	1. Allows automated product cycle management (sales, inventory, stock availability), and online integration 2. Inditex plans to implement RFID technology across all of its brands by 2020
Payment options	1. Customers can pay via mobile home payment services or the Group's InWallet app across all of its brands 2. InWallet allows for an integrated receipt management across brands, for both store and online purchases, thus simplifying an exchange or return process
Click & Collect via automated collection points	1. Shoppers can buy online and then collect their product from an automated collection point by just scanning their receipt QR code 2. An in-store robotic arm then organizes and delivers the requested package
Self-checkout kiosks	1. Self-checkout machines will automatically detect the garment being purchased 2. Customers only need to confirm their items on the screen band make payment to complete the transaction
Interactive fitting room system	1. The fitting rooms are equipped with RFID scanner, which scans the garment shoppers bring in, and provides outfit and accessories suggestions 2. A shopper can also view different size or color options available in-store without leaving the fitting room
Augmented reality app by Zara	1. The app allows customers to glance through the 'studio collection' by pointing their phones at the sensors within the store, and 'click through' to buy it 2. The app also shows alternative outfits when pointed at 'some boxes of outline orders

Source: Chiara Battistini, "Inditex: A Winning Model Still," JP Morgan Cazenove, January 30, 2019, accessed via Thomson.

Exhibit 18 Self-Service Checkout

Source: Natalie Theo, "Zara's Self-Service Check Out Highlights a Stronger Focus on Creating Better In-Store Customer Experiences," Medium, January 11, 2018, https://medium.com/@dressipi/zaras-self-service-check-out-highlights-a-stronger-focus-on-creating-better-in-store-customer-5ce2c2792f3a, accessed June 2018.

Exhibit 19 Checking inventory from other stores and online on IPOD



Source: Company data.

Endnotes

[1] "The Best-Performing CEOs in the World 2018", https://hbr.org/2018/11/the-best-performing-ceos-in-the-world-2018, accessed November 2019.

[2] Michael Stothard," Zara owner Inditex ramps up digital assault," Financial Times (FT.Com), April 2, 2018

[3] "Zara," Forbes, May 2018, https://www.forbes.com/companies/zara/, accessed June 2018.

[4] Zara's Website.

[5] "Zara," Forbes, May 2018, https://www.forbes.com/companies/zara/, accessed June 2018.

[6] Deutsche Bank Markets Research, „Charting the year", March 15, 2018, p. 37, via Thomson, accessed June 2018.

[7] "Zara supply chain analysis - the secret behind Zara's retail success," tradegecko, https://www.tradegecko.com/blog/zara-supply-chain-its-secret-to-retail-success

[8] Kasra Ferdows, Michael A. Lewis, and Jose A.D. Machuca, "Rapid-Fire Fulfillment," Harvard Business Review, November 2004, https://hbr.org/2004/11/rapid-fire-fulfillment, accessed September 2021.

[9] Felipe Caro et al., "Zara Uses Operations Research to Reengineer Its Global Distribution Process," INFORMS, January-February 2010, http://faculty.london.edu/jgallien/ZaraInterfaces2010.pdf, accessed September 2021.

[10] Martin Roll, "The Secret of Zara's Success: A Culture of Customer Co-creation," Martin Roll website, at https://martinroll.com/resources/articles/strategy/the-secret-of-zaras-success-a-culture-of-customer-co-creation/, accessed June 2018

[11] Deborah Weinswig, "Retailers Should Think Like Zara: What We Learned At The August Magic Trade Show," Forbes, August 2017, https://www.forbes.com/sites/deborahweinswig/2017/08/28/retailers-should-think-like-zara- what-we-learned-at-the-august-magic-trade-show/#54a4e57f3e52, accessed September 2021.

[12] Gap Inc., 2009 Annual Report, http://media.corporate-ir.net/media_files/irol/11/111302/gps_ar_09.pdf, accessed September 2021.

[13] Ayelet Israeli and Jill Avery, "Predicting Consumer Tastes with Big Data at Gap," HBS No. 9-507-115 (Boston: Harvard Business School Publishing, 2018), accessed September 2021.

[14] Ibid.

[15] Nicole DeHoratius, Ananth Raman. Inventory Record Inaccuracy: An Empirical Analysis. Management Science, 2008. https://pubsonline.informs.org/doi/abs/10.1287/mnsc.1070.0789

[16] "Zara sigue reinventando su retail y reabre en Stratford con un híbrido online-offline", Modaes.es, May 17, 2018, https://www.modaes.es/empresa/zara-sigue-reinventando-su-retail-y-reabre-en-stratford-con-un-hibrido-online-offline.html; Zara Sharpens Focus on Digital Zara Sharpens Focus on Digital", The Wall Street Journal, March 14, 2018, https://www.wsj.com/articles/zara-sharpens-focus-on-digital-1521042436, all accessed June 2018.

[17] "Zara sigue reinventando su retail y reabre en Stratford con un híbrido online-offline," Modaes.es, May 17, 2018, https://www.modaes.es/empresa/zara-sigue-reinventando-su-retail-y-reabre-en-stratford-con-un-hibrido-online-offline.html, accessed June 2018; "Zara Stratford," Zara website, Maty 18, 2018, at https://www.inditex.com/article?articleId=569282&title=Zara+Stratford+flagship+store+pioneers+new+approach++to+integrating+stores+and+online

[18] "Zara Greets Shoppers With Robots, IPads and Connected Mirrors," Bloomberg, May 17, 2018, https://www.businessoffashion.com/articles/news-analysis/zara-greets-shoppers-with-robots-ipads-and-connected-mirrors